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OFFICIALDocket No.: H0002992
(PATENT)**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:
Hoki Kwon

Customer No.: 000128

Application No.: 10/078,473

Confirmation No.: 4854

Filed: February 21, 2002

Art Unit: 2828

**For: CARBON DOPED GAASSB TUNNEL
JUNCTION FOR THE APPLICATION OF
LONG-WAVELENGTH (1.3-1.55UM)
VCSEL**

Examiner: Dung T. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the U.S. filing date, OR more than three months after the date of entry of the national stage of a PCT application, AND after the mailing date of the first Office Action on the merits, whichever occurs first, but before the mailing date of a Final Office Action or Notice of Allowance (37 CFR 1.97(c)).

A copy of each non US patent references on the PTO/SB/08 is attached.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material

DC:50260876.1

Application No.: 10/078,473

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Docket No.: H0002992

information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

Our check in the amount of \$180.00 covering the fee set forth in 37 CFR 1.17(p) is enclosed. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 01-1125, under Order No. H0002992-US. A duplicate copy of this paper is enclosed.

Dated: February 5, 2004

Respectfully submitted,

By  42,766

Song K. Jung

Registration No.: 35,210

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DC:50260876.1

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PTO/SB-08A (04-03)

Approved for use 04-30-2003. OMB 0651-0031

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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|---|--|------------------------|----------------|
| Substitute for form 1449A-PTO | | COMPLETE IF KNOWN | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE AS MANY SHEETS AS NECESSARY) | | Application Number | 10/078,473 |
| | | Filing Date | 2-21-02 |
| | | First Named Inventor | Ho Ki Kwon |
| | | Art Unit | 2828 |
| | | Examiner Name | Dung T. Nguyen |
| | | Attorney Docket Number | H0002992 |

| U.S. PATENT DOCUMENTS | | | | | | |
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| Examiner Initials* | Cite No ¹ | Document Number | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear |
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| Examiner Signature | | Date Considered | |
|-----------------------|--|--------------------|--|

EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.01. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

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| Substitute for form 1449B-PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE AS MANY SHEETS AS NECESSARY). Sheet <u>2</u> of <u>8</u> | | COMPLETE IF KNOWN | |
| | | Application Number | 10/078,473 |
| | | Filing Date | 2-21-02 |
| | | First Named Inventor | Ho Ki Kwon |
| | | Group Art Unit | 2828 |
| | | Examiner Name | Dung T. Nguyen |
| | | Attorney Docket Number | H0002992 |

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| | Application Number | 10/078,473 |
| Filing Date | 2-21-02 | |
| First Named Inventor | Ho Ki Kwon | |
| Group Art Unit | 2828 | |
| Examiner Name | Dung T. Nguyen | |
| Attorney Docket Number | H0002992 | |

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|-----------------------|--|--------------------|--|
| Examiner Signature | | Date Considered | |
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| Substitute for form 1449B-PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE AS MANY SHEETS AS NECESSARY) Sheet <u>4</u> of <u>5</u> | COMPLETE IF KNOWN | |
| | Application Number | 10/078,473 |
| | Filing Date | 2-21-02 |
| | First Named Inventor | Ho Ki Kwon |
| | Group Art Unit | 2828 |
| | Examiner Name | Dung T. Nguyen |
| Attorney Docket Number | | H0002992 |

| FOREIGN PATENT DOCUMENTS | | | | | | | | |
|--------------------------|----------------------|---------------------------|---------------------|-----------------------------------|-----------------------------|---|--|----------------|
| Examiner Initials* | Cite No ¹ | Foreign Patent Document | | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear | T ² |
| | | Country Code ² | Number ¹ | Kind Code ² (if known) | | | | |
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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(USE AS MANY SHEETS AS NECESSARY)

Sheet 5 of 8

COMPLETE IF KNOWN

| | |
|------------------------|----------------|
| Application Number | 10/078,473 |
| Filing Date | 2-21-02 |
| First Named Inventor | Ho Ki Kwon |
| Group Art Unit | 2828 |
| Examiner Name | Dung T. Nguyen |
| Attorney Docket Number | H0002992 |

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| Examiner Initials* | Cite No ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published | T ² |
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| | Application Number | 10/078,473 |
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| | First Named Inventor | Ho Ki Kwon |
| | Group Art Unit | 2828 |
| | Examiner Name | Dung T. Nguyen |
| | Attorney Docket Number | H0002992 |

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| | Application Number | 10/078,473 |
| | Filing Date | 2-21-02 |
| | First Named Inventor | Ho KI Kwon |
| | Group Art Unit | 2828 |
| | Examiner Name | Dung T. Nguyen |
| | Attorney Docket Number | H0002992 |

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| | | Filing Date | 2-21-02 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | First Named Inventor | Ho Ki Kwon | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Group Art Unit | 2828 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Examiner Name | Dung T. Nguyen | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Attorney Docket Number | H0002992 | | | | | | | | | | | | | | | | | | | | | | | | |
| Sheet <u>8</u> of <u>8</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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|------------------------|-----------------|
| Application Number | 10/078, 473 |
| Filing Date | 2/21/2002 |
| First Named Inventor | Ho Ki Kwon |
| Art Unit | 2828 |
| Examiner Name | Dung T. Nguyen. |
| Attorney Docket Number | H0002992 |

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| | | WO | 01/63708 | A2 | 8-30-2001 | Boucort et al. | | X |
| | | EP | 0 715 357 | A1 | 6-5-1998 | McDermott | | X |
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